HP StorageWorks Performance Advisor XP
Version 2.0
September 2004
Readme.txt
Product Number B9369-96075
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1.0 OVERVIEW
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HP StorageWorks Performance Advisor XP (PA XP) is an Internet
application that collects and monitors real-time performance
of the HP StorageWorks family of XP disk array products. Using
a simple browser-based interface, you can quickly customize
performance data collection and set performance alarms.
PA XP provides real-time and historical data on the following:

* LDEV I/O
* Front-end and back-end port utilization
* Internal bus utilization

New features and defect fixes are summarized in sections 3.0
and 4.0. Section 5.0 discusses known issues and section 6.0
provides an appendix for miscellaneous information not covered
in the previous sections.

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2.0 FIRMWARE REQUIREMENTS
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PAXP 2.0 requires that the managed disk arrays have
certain minimum firmware levels.

  - For XP12000: Firmware version 50.01.30.00/00 is required.
    (Firmware version 50.01.30.00/00 or later is recommended.)
  - For XP1024/XP128: Firmware version 21.10.09.00/00 is
    required. (Firmware version 21.10.09.00/00 or later is
    recommended.)
  - For XP512/XP48: Firmware version 1.19.51.00/00 is required.

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     (Firmware version 51.19.59.00/00 or later is recommended.)
   - For X256: Firmware version 52.49.40.00/00 or later is
     required.



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3.0  New Features
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PA XP 2.0 introduces the following features:

3.1  Support for HP StorageWorks XP12000 Disk Array
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This version of PA XP introduces support for the HP
StorageWorks XP12000 Disk Array.

3.2  Remote Deployment of Host Agents
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You can now remotely deploy PA XP host agents to the host
systems from the management station. These host agents collect
XP disk array data.

3.3  Login and Security
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You can create multiple user accounts and assign them to
groups that have different access permissions. If PA XP and
Command View XP co-exist on the same management station, a
single Command View XP sign on enable you to access PA XP from
Command View XP.

3.4  Extended Host Platform Support
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The following host operation systems are now supported:
- Windows 2003 Data Center Edition (single processor, 32-bit)
- HP-UX 11.23pi (local installation only)
- Red Hat Enterprise Linux 3.0 (32-bit, kernel 2.4.19)
- United Linux 1.0/SUSE LINUX Enterprise Server
  (32-bit, kernel 2.4.21)



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4.0  DEFECT FIXES
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This version of PA XP fixes several defects.

4.1  Array View Window Showed Mismatch in Port and MP Activity
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On the Array View window, the Port activity was sometimes less
than its CHIP's MP activity. This defect is now fixed.
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5.0  KNOWN ISSUES
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The issues and limitations described in this section are known
to exist for PA XP 2.0.

5.1  HP-UX Web Client Not Supported
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PA XP no longer supports HP-UX hosts as web clients.

5.2  Installing Command View XP on Existing PA XP Management
     Station
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If you want to install Command View XP 2.0 on an existing
PA XP 2.0 management station, use the following procedure.
Refer to the PA XP and Command View XP installation guides for
step-by-step procedures.

a. Run the Backup/Restore utility as described in the HP
   StorageWorks Performance Advisor XP Installation Guide.

b. Uninstall PA XP from the management station.

c. Install Command View XP 2.0 on the management station.

d. Reinstall PA XP 2.0 on the management station.

e. Run the Backup/Restore utility to restore the PA XP
   management station data files.

5.3  Delay in Initial Data Collection
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The first disk array data collection will take longer than the
configured frequency because PA XP must first collect
configuration information from the array before collecting its
performance data. After this initial collection cycle,
subsequent data collection cycles will be the same as the
frequency configured within PA XP.

If you modify the frequency or request data from the Host
Information window, an initial data collection is triggered,
which results in the delayed data collection described above.

5.4  Slow Data Loading in ArrayView Window
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Data loading in the ArrayView window may be delayed if you
are viewing data from multiple XP disk arrays. PA XP waits
until data from all expected arrays is collected before
displaying the data on this window.

5.5  Browser Refresh Button Exits PA XP
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Clicking the web browser's Refresh button exits PA XP. To
obtain the latest data on the main window, exit PA XP, then
log back in. To obtain the latest data on the Configuration
window, click the Configuration tab on the main window.

5.6 LUSE Component I/O's Attributed to LUSE Master RAID Group
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In the case of LUSE volumes, PA XP counts the LUSE Component
I/O's as I/O's hitting the LUSE Master LDEV. As a result, if a
LUSE volume spans across multiple RAID Groups, the LUSE
component I/O's are accounted for in the RAID Group to which
the LUSE Master belongs.

5.7 Command View Data for Performance Estimator Feature not
     Propagated When SSL Enabled

Command View data cannot be propagated to PA XP management
stations working in SSL mode. If PA XP and Command View XP are
installed on the same management station and a second instance
of PA XP is installed on another management station on which
SSL is enabled, then the first PA XP management station cannot
propagate Command View XP data to the second PA XP management
station. This data is required in order for the Performance
Estimator feature to work properly.

5.8 Maximum Number of Data Points on Chart Window

The Chart window displays a maximum of 1000 data points even
if the selected time range contains more than 1000 data points.

5.9 Possible Limitation with High Number of LUNs per Port
     on XP1024/XP128

If an XP1024 or XP128 has more than 256 LUNs on a port, PA XP
may not report the additional LUNs.

5.10 First ACP Pair on Main Window Ignores Filtering

On the main PA window, if you select the first ACP pair from
the list and click the Request Data button, all ACP pairs are
displayed in the Grid Display window. Workaround: Reselect the
first ACP pair in the Grid Display window to view the filtered
data.

5.11 PA XP Host Agent Support for HP-UX 11.23pi

PA XP 2.0 only supports local installation for the HP-UX
11.23pi host agent.

For HP-UX 11.23pi running on PA-RISC hosts, the applicable file
is hostagent_hpux1123PI_PA.tar.

For HP-UX 11.23pi running on IA64 hosts, the applicable file is
hostagent_hpux1123PI_IA.tar.

To install the HP-UX 11.23pi host agent:

1. FTP the corresponding .tar file to a directory on the HP-UX
   11.23pi host.

2. Extract the .tar file using the tar command.
   (For example, tar -xvf hostagent_hpux11.23PI_IA.tar)
   This creates a directory named depots under the current
   directory.

3. Go to the depots directory, and run unix_local_install.sh
   to install the host agent.

Note: To uninstall the HP-UX 11.23pi host agent, go to the
      depots directory, and run unix_local_uninstall.sh

5.12 Recommended Maximum Number of Hosts for Remote Host
     Agent Deployment Tool

Depending on the management station's processor speed and
network stability, deploying the host agent to a large number
of hosts at the same time may fail. HP recommends deploying
a maximum of five hosts at a time when using the remote host
agent deployment tool.

5.13 Host Agent Installation/Uninstallation Status Does Not
     Update

When simultaneously installing or uninstalling multiple host
agents, the status indicator in the Remote Deployment tool may
not update. In such cases, the operation will complete;
however, the status indicator will continue to display only a
certain percentage complete.
Workaround: Close and reopen the Remote Deployment window to
determine the current status of the hosts in question. If you
experience this behavior frequently, consider installing or
uninstalling a maximum of five hosts at one time.

5.14 Confusing Prompts when Locally Installing the Host Agent
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This condition only exists if PA XP and Command View XP are
installed on the same management station. When running the
local host agent installation script, you receive separate
prompts asking if you want to install the PA XP and Command
View XP Path Connectivity host agents.

If you respond "no" to either of these prompts, the script will
prompt you again asking if you want to install this "optional"

host agent component (the component you responded "no" to previously). You may ignore this prompt, and respond "no" again if you do not want to install that particular host agent.

5.15 Host Agent Services/Processes Stopped when Locally
     Uninstalling Host Agents

When the PA XP and Command View XP Path Connectivity host agents are installed on the same host and you are locally uninstalling them, you are prompted separately to remove each host agent.

If you enter "no" to both prompts, the host agents will not be uninstalled; however, the host agent service/process on the host agent remains stopped. You must manually start the service/process as described in the HP StorageWorks Performance Advisor XP Installation Guide.

This behavior will also occur if you close the command line window or stop the command prior to it completing.

5.16 Host Agent may not Send Data After Reinstallation

If you redeploy the PA XP host agent to a host from a different management station, the host agent may not send data to the new management station. Workaround: After uninstalling the host agent from the host, make sure you remove the following files before redeploying the host agent from the new management station:

- paxp_service.properties
- PAXP_SERVICE.scp

For Windows hosts, these files are located by default in the <drive>:\Program Files\Hewlett-Packard\sanmgr\hostagent\config directory.

For Unix hosts, these files are located by default in the /opt/sanmgr/hostagent/config directory.

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6.0 APPENDIX
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The information contained within this appendix is information pertinent to PA XP not covered elsewhere in the documentation.

6.1 Documentation provided on the Performance Advisor CD-ROM

CLUI.pdf (Command Line Interface document)
InstallGuide.pdf (Installation instructions)
Docs\UserGuide.pdf (A user guide for the PA XP interface)
Docs\CONFIG.HTML (Instructions on configuring PAXP)
Docs\INDEX.HTML (An index of PA XP documentation)

Docs\INTRODUCTION.HTML (An introduction to PA)
Docs\PAXPDATADEFINITIONS (Data field descriptions)
Docs\TRADEMARKS.HTML (A list of trademarks)
Docs\TROUBLESHOOTING.HTML (Instructions on troubleshooting
  PA XP)
Tools\CmdLineUserInterface\CLUI_DOC.HTML (Command Line
  Interface document)